

Ali Aydoğdu

JUNIOR SCIENTIST

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30.09.1985 Zonguldak/Turkey

Education

Middle East Technical University

B.S. IN MATHEMATICS

Ankara - Turkey

Sep. 2003 - Jun. 2009

Middle East Technical University

M.S. IN PHYSICAL OCEANOGRAPHY

Mersin - Turkey

Sep. 2009 - Jul. 2012

- Thesis Title: *Coupled Modelling Attempt of Hydrodynamics and Ecosystem of the Northern Levantine Basin*
- Supervisor: Emin Özsoy

Università Ca' Foscari / CMCC

PHD. IN SCIENCE AND MANAGEMENT OF CLIMATE CHANGE

Venice - Italy

Sep. 2013 - Feb. 2017

- Thesis Title: *Advanced Modeling and Data Assimilation Methods for the Design of Sustained Marine Monitoring Networks*
- Supervisor: Nadia Pinardi

Training

Advanced School on Data Assimilation

CENTRO EURO MEDITERRANEO SUI CAMBIAMENTI CLIMATICI (CMCC) AND GRUPPO NAZIONALE DI OCEANOGRAFIA OPERATIVA (GNOO)

Bologna - Italy

Jun. 7-11, 2010

Coastal Modeling Summer School

UNIVERSITY OF TOULON

La Londe, France

Sep. 19-23, 2011

Advanced School on Data Assimilation

CENTRO EURO MEDITERRANEO SUI CAMBIAMENTI CLIMATICI (CMCC)

Bologna - Italy

Jun. 24-28, 2013

School on Ocean Climate Modelling

ICTP

- Physical and Biogeochemical Dynamics of Semi-Enclosed Seas

Ankara, Turkey

Sep. 28 / Oct. 1, 2015

PhD Fellow - Visiting

NCAR

- CGD and CISL Laboratories

Boulder, Colorado / US

Apr. 1 / Jun. 30, 2016

Skills

Languages Turkish, English, Italian

Programming Fortran, C/C++, Python

Scripting Bash, Csh

Post-processing Matlab, Ferret, Generic Mapping Tools

HPC OpenMP, MPI

Document Preparation \LaTeX

Research Tools Finite Element Ocean Model (FESOM), Regional Ocean Modeling System (ROMS), neXt Generation Sea Ice Model (neXtSIM), Nucleus for European Modelling of the Ocean (NEMO), Data Assimilation Research Testbed (DART), OceanVar Variational Data Assimilation Tool

Research Experience

Research Assistant

INSTITUTE OF MARINE SCIENCES - METU

Mersin - Turkey

Sep. 2009 – Jul. 2012

- EU MyOcean I-II and Sesame Projects: Climate projections of the physics and biogeochemistry in the Northern Levantine Sea

Research Assistant

CENTRO EURO MEDITERRANEO SUI CAMBIAMENTI CLIMATICI (CMCC)

Bologna - Italy

Mar. 2013 – Sep. 2013

- EU JERICO Project: Observing system simulation experiments in the Adriatic Sea

Postdoctoral Researcher

CENTRO EURO MEDITERRANEO SUI CAMBIAMENTI CLIMATICI (CMCC)

Bologna - Italy

Sep. 2016 – Jun. 2017

- Implementation of global ocean forecasting system

Postdoctoral Researcher

NANSEN ENVIRONMENTAL AND REMOTE SENSING CENTRE (NERSC)

Bergen - Norway

Jun. 2017 – Jun. 2019

- NFR REDDA Project: Ensemble data assimilation using adaptive mesh models / sea-ice data assimilation

Visiting Researcher

NATIONAL CENTER FOR ATMOSPHERIC RESEARCH (NCAR)

Boulder - USA

Aug. 2019 – Sep. 2019

- CISEL Visiting Program. FESOM/DART interface for Manhattan

Junior Scientist

CENTRO EURO MEDITERRANEO SUI CAMBIAMENTI CLIMATICI (CMCC)

Bologna - Italy

Sep. 2019 – Present

- Responsible for Regional Ocean Data Assimilation systems @CMCC

Field Research Activity

RESEARCH CRUISE

- 2009 - Seven days along Turkish coasts of the Aegean Sea and Mediterranean with R/V Bilim2
- 2010 - Seven days in the Turkish Straits System with R/V Bilim2
- 2010 - Three days in the Gulf of Mersin with R/V Bilim2

Peer-reviewed Journal Articles

2019

- **Aydoğdu, A.**, Carrassi, A., Guider, C.T., Jones, C.K.R.T, Rampal, P.: *Data assimilation using adaptive, non-conservative, moving mesh models*, Nonlin. Processes Geophys., 26, 175-193, doi:10.5194/npg-26-175-2019, 2019.

2018

- **Aydoğdu, A.**, Pinardi, N., Özsoy, E., Danabasoglu, G., Gürses, Ö. and Karspeck A.: *Circulation of the Turkish Straits System under interannual atmospheric forcing*, Ocean Sci., 14, 999-1019, doi:10.5194/os-14-999-2018, 2018.
- **Aydoğdu, A.**, Hoar, T. J., Vukicevic, T., Anderson, J. L., Pinardi, N., Karspeck, A., Hendricks, J., Collins, N., Macchia, F., and Özsoy, E.: *OSSE for a sustainable marine observing network in the Sea of Marmara*, Nonlin. Processes Geophys., 25, 537-551, doi:10.5194/npg-25-537-2018, 2018.

2016

- **Aydoğdu, A.**, Pinardi, N., Pistoia, J., Martinelli, M., Belardinelli, A. and Sparnocchia, S.: *Assimilation experiments for the Fishery Observing System in the Adriatic Sea*, Journal of Marine Systems, Volume 162, October 2016, Pages 126-136, ISSN 0924-7963, <http://dx.doi.org/10.1016/j.jmarsys.2016.03.002>.
- Sparnocchia, S., Nair, R., Petihakis, G., **Aydoğdu, A.**, Dobricic, S., Farcy, P., Martinelli, M., Petersen, W. and Petit de la Villeon, L.: *An interlinked coastal observatory network for Europe* (2016) Journal of Operational Oceanography, Vol. 9, Iss. sup1, 2016

Book Chapters

2017

- Gürses, Ö., **Aydoğdu, A.**, Pinardi, N., and Özsoy, E. (2017). *A finite element modeling study of the Turkish Straits System*. In Oztürk, B. et al., editor, *The Sea of Marmara - Marine Biodiversity, Fisheries, Conservations and Governance*, pages 169 – 184. TUDAV Publication.

2014

- Özsoy, E., Sofianos, S., Gertman, I., Mantziafou, A., **Aydoğdu, A.**, Georgiou, S., Tutsak, E., Lascaratos, A., Hecht, A. and Latif, M. A. (2014) *Deep-Water Variability and Interbasin Interactions in the Eastern Mediterranean Sea, in The Mediterranean Sea: Temporal Variability and Spatial Patterns* (eds G. L. E. Borzelli, M. Gačić, P. Lionello and P. Malanotte-Rizzoli), John Wiley & Sons, Inc., Oxford. doi: 10.1002/9781118847572.ch7

Selected Conferences/Workshops

2020

- **4th Data Assimilation Task Team Meeting (of OceanPredict)**. CERFACS. Toulouse, France. 20-22 January 2020.

2019

- **Scoping Workshop on Future Activities to Assess Impact of Various Observing Systems on Earth System Prediction**. World Meteorological Organization. Geneva, Switzerland, 9-11 December 2019
- **Lunch-time seminar at NCAR**. *Data assimilation using adaptive, moving mesh models*. August 21, 2019. Boulder, USA.

2018

- **Data Assimilation Meetings** at DARC. June 6. Reading, UK. Invited talk: *Ensemble Data Assimilation on a Non-Conservative Adaptive Moving Mesh*.
- **Prediction and Data Assimilation for Non-local Diffusions Workshop**. June 4-5. Edinburgh, UK. Invited Talk: *Ensemble Data Assimilation on a Non-Conservative Adaptive Moving Mesh*.
- **EnKF workshop**. May 28-30. Bergen, Norway. Talk: *Ensemble Data Assimilation on a Non-Conservative Adaptive Moving Mesh*
- **EGU General Assembly**. April 8-13. Vienna, Austria.
- **Arctic Frontiers** 2018. January 21-25. Tromso, Norway. Talk: *Towards ensemble forecasting and data assimilation in the Arctic using a Lagrangian sea-ice model*.

2017

- **EGU General Assembly**. April 23-28. Vienna, Austria. Talk: *Numerical simulations of the Turkish Straits System for the 2008-2013 period*.
- **8th EuroGOOS International Conference: Operational Oceanography serving sustainable marine development**. October 3-5. Bergen, Norway.
- **Numerical Modeling, Predictability and Data Assimilation in Weather, Ocean and Climate: A Symposium Honoring the Legacy of Anna Trevisan**. October 17-20. Bologna, Italy.
- **8th International Workshop on Sea Ice Modelling, Data Assimilation and Verification**. November 1-3. Bergen, Norway.

Before 2016

- 2016 - 21st **CESM workshop**. June 20-23. Breckenridge, Colorado, USA.
- 2015 - **The 47th Liege Colloquium** on Marine Environmental Monitoring, Modelling and Prediction. May 4-8. Liege, Belgium. Talk on *Assimilation Experiments for the Fishery Observing System in the Adriatic Sea* (invited young scientist)
- 2014 - 7th **EuroGOOS conference**. 28-30 October. Lisbon, Portugal.
- 2013 - **COS-TT GODAE Oceanview Workshop**. February 4-7. Lecce, Italy. Organized by CMCC-Italy. Talk on *Recent Performance of the Northern Levantine Circulation Model (NLEV), Sea Level Calibration and Applications*